

IN THE CLAIMS

Please amend the claims as follows:

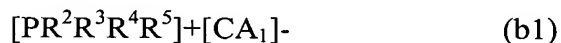
Claim 1 (Currently Amended): A process for producing a cycloolefin addition polymer, comprising

addition-polymerizing one or more cycloolefin monomers comprising a cycloolefin compound represented by formula  $[(1)]$  (2)-1 or formula (2)-2, in the presence of a multi-component catalyst, comprising:

(a) a palladium compound, and

(b) one or more phosphorus compounds selected from the group consisting of compounds (b-1) and (b-2):

wherein (b-1) comprises a phosphonium salt represented by formula (b1):



wherein P is a phosphorus atom,

$R^2$  is a substituent selected from the group consisting of a hydrogen atom, an alkyl group of 1 to 20 carbon atoms, a cycloalkyl group and an aryl group,

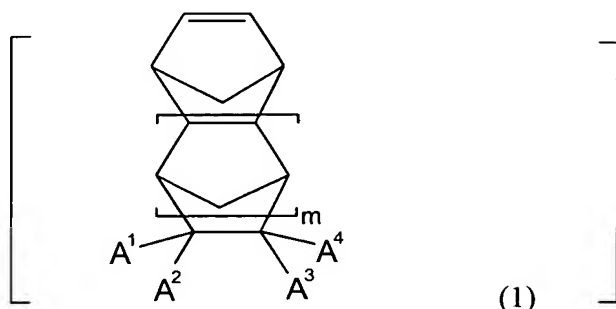
$R^3$  to  $R^5$  are each independently a substituent selected from the group consisting of an alkyl group of 1 to 20 carbon atoms, a cycloalkyl group and an aryl group, and

$[CA_1]^-$  is a counter anion selected from the group consisting of a carboxylic acid anion, a sulfonic acid anion and a superstrong acid anion comprising an atom selected from the group consisting of B, P Sb and F,

wherein (b-2) comprises an addition complex of

a phosphine compound that comprises a substituent selected from the group consisting of an alkyl group of 3 to 15 carbon atoms, a cycloalkyl group and an aryl group, wherein the addition complex has a cone angle ( $\theta$  deg) of 170 to 200,

and an organoaluminum compound;



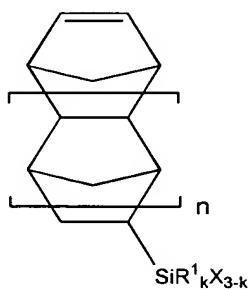
wherein  $A^1$  to  $A^4$  are each independently selected from the group consisting of a hydrogen atom, a halogen atom, an alkyl group of 1 to 15 carbon atoms, a cycloalkyl group, an aryl group, an ester group, an oxetanyl group, an alkoxy group, a trialkylsilyl group and a hydroxyl group,

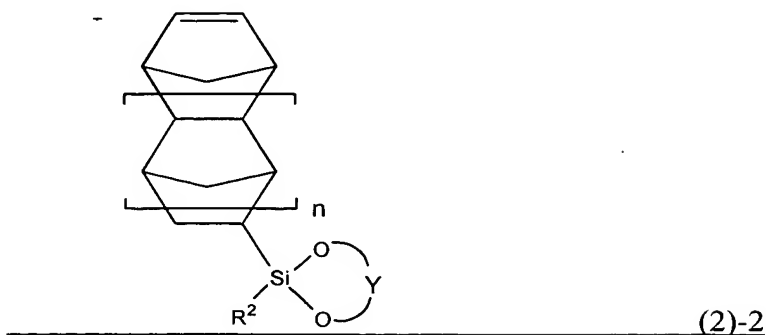
wherein  $A^1$  to  $A^4$  may be each bonded to a cyclic structure through a bond group of 0 to 10 carbon atoms, wherein said bond group is selected from the group consisting of an alkylene group of 1 to 20 carbon atoms, an oxygen atom, a nitrogen atom and a sulfur atom,

wherein  $A^1$  and  $A^2$  may form an alkylidene group comprising 1 to 5 carbon atoms, a substituted or unsubstituted alicyclic or aromatic ring comprising 5 to 20 carbon atoms or a heterocyclic ring comprising 2 to 20 carbon atoms,

wherein  $A^1$  and  $A^3$  may form a substituted or unsubstituted alicyclic or aromatic ring comprising 5 to 20 carbon atoms or a heterocyclic ring comprising 2 to 20 carbon atoms, and

wherein  $m$  is 0 or 1;





wherein R<sup>1</sup> and R<sup>2</sup> are each a substituent selected from the group consisting of an alkyl group of 1 to 10 carbon atoms, a cycloalkyl group and an aryl group,

wherein X is selected from the group consisting of an alkoxy group of 1 to 5 carbon atoms and a halogen atom,

wherein Y is a residue of a hydroxyl group of an aliphatic diol comprising 2 to 4 carbon atoms,

wherein k is an integer of 0 to 2, and

n is 0 or 1; to form the cycloolefin addition polymer.

Claim 2 (Previously Presented): The process for producing a cycloolefin addition polymer as claimed in claim 1, wherein the multi-component catalyst further comprises, in addition to the component (a) and the component (b-1),

(c) a compound selected from the group consisting of an ionic boron compound, an ionic aluminum compound, an aluminum compound of Lewis acidity and a boron compound of Lewis acidity.

Claim 3 (Previously Presented): The process for producing a cycloolefin addition polymer as claimed in claim 1, wherein the multi-component catalyst further comprises, in addition to the component (a) and the component (b-2),

(d) an organoaluminum compound.

Claim 4 (Original): The process for producing a cycloolefin addition polymer as claimed in claim 3, wherein the content of the organoaluminum compound (d) is in the range of 0.1 to 200 mol based on 1 gram atom of palladium of the palladium compound (a).

Claim 5 (Previously Presented): The process for producing a cycloolefin addition polymer as claimed in claim 1, wherein the palladium compound (a) is an organic carboxylate of palladium or a  $\beta$ -diketone compound of palladium.

Claim 6 (Currently Amended): The process for producing a cycloolefin addition polymer as claimed in claim 1, wherein the multi-component catalyst is a catalyst prepared in the presence of at least one compound selected from the group consisting of a polycyclic monoolefin comprising a bicyclo[2.2.1]hept-2-ene structure, a non-conjugated diene comprising a ~~bicyclo[2.2.1]hept-2-ene~~ bicyclo[2.2.1]hept-2-ene structure, a monocyclic non-conjugated diene, a straight-chain non-conjugated diene, and combinations thereof.

Claim 7 (Previously Presented): The process for producing a cycloolefin addition polymer as claimed in claim 1, wherein the multi-component catalyst is a catalyst prepared in the presence of bicyclo[2.2.1]hept-2-ene, a bicyclo[2.2.1]hept-2-ene derivative comprising one or more hydrocarbon groups comprising 1 to 15 carbon atoms, or a combination thereof.

Claim 8 (Canceled).

Claim 9 (Currently Amended): The process for producing a cycloolefin addition polymer as claimed in claim [[8]] 1, wherein the cycloolefin compound of formula (2)-1 or formula (2)-2 is used in a total amount of 0.1 to 30% by mol in the whole amount of all the cycloolefin monomers.

Claim 10 (Canceled).

Claim 11 (Previously Presented): The process for producing a cycloolefin addition polymer as claimed in claim 2, wherein the multi-component catalyst further comprises  
(d) an organoaluminum compound.

Claim 12 (Previously Presented): The process for producing a cycloolefin addition polymer as claimed in claim 11, wherein the content of the organoaluminum compound (d) is in the range of 0.1 to 200 mol based on 1 gram atom of palladium of the palladium compound (a).

Claim 13 (Previously Presented): The process for producing a cycloolefin addition polymer as claimed in claim 2, wherein the palladium compound (a) is an organic carboxylate of palladium or a  $\beta$ -diketone compound of palladium.

Claim 14 (Previously Presented): The process for producing a cycloolefin addition polymer as claimed in claim 3, wherein the palladium compound (a) is an organic carboxylate of palladium or a  $\beta$ -diketone compound of palladium.

Claim 15 (Previously Presented): The process for producing a cycloolefin addition polymer as claimed in claim 4, wherein the palladium compound (a) is an organic carboxylate of palladium or a  $\beta$ -diketone compound of palladium.

Claim 16 (Currently Amended): The process for producing a cycloolefin addition polymer as claimed in claim 2, wherein the multi-component catalyst is a catalyst prepared in the presence of at least one compound selected from the group consisting of a polycyclic monoolefin comprising a bicyclo[2.2.1]hept-2-ene structure, a non-conjugated diene comprising a ~~bicyclo[2.2.1]hept-2-ene~~ bicyclo[2.2.1]hept-2-ene structure, a monocyclic non-conjugated diene, a straight-chain non-conjugated diene, and combinations thereof.

Claim 17 (Currently Amended): The process for producing a cycloolefin addition polymer as claimed in claim 3, wherein the multi-component catalyst is a catalyst prepared in the presence of at least one compound selected from the group consisting of a polycyclic monoolefin comprising a bicyclo[2.2.1]hept-2-ene structure, a non-conjugated diene comprising a ~~bicyclo[2.2.1]hept-2-ene~~ bicyclo[2.2.1]hept-2-ene structure, a monocyclic non-conjugated diene, a straight-chain non-conjugated diene, and combinations thereof.

Claim 18 (Currently Amended): The process for producing a cycloolefin addition polymer as claimed in claim 4, wherein the multi-component catalyst is a catalyst prepared in the presence of at least one compound selected from the group consisting of a polycyclic monoolefin comprising a bicyclo[2.2.1]hept-2-ene structure, a non-conjugated diene comprising a ~~bicyclo[2.2.1]hept-2-ene~~ bicyclo[2.2.1]hept-2-ene structure, a monocyclic non-conjugated diene, a straight-chain non-conjugated diene, and combinations thereof.

Claim 19 (Currently Amended): The process for producing a cycloolefin addition polymer as claimed in claim 5, wherein the multi-component catalyst is a catalyst prepared in the presence of at least one compound selected from the group consisting of a polycyclic monoolefin comprising a bicyclo[2.2.1]hept-2-ene structure, a non-conjugated diene comprising a ~~bicyclo[2.2.1]hept-2-ene~~ bicyclo[2.2.1]hept-2-ene structure, a monocyclic non-conjugated diene, a straight-chain non-conjugated diene, and combinations thereof.

Claim 20 (Previously Presented): The process for producing a cycloolefin addition polymer as claimed in claim 2, wherein the multi-component catalyst is a catalyst prepared in the presence of bicyclo[2.2.1]hept-2-ene, a bicyclo[2.2.1]hept-2-ene derivative comprising one or more hydrocarbon groups comprising 1 to 15 carbon atoms, or a combination thereof.